

ABSTRACT OF THE DISCLOSURE

A method and apparatus for the production of composite molded materials in which a portion of the mold tooling is a porous, gas-permeable material that enables the venting of entrapped air, moisture, and reactant or by-product gases without the necessity for a physical disruption of the mold components to accomplish the venting. This enables a reduction in cycle time to produce the molding product which reduces manufacturing costs. Applications in which the use of such mold and molding method are advantageous include, among others, the molding of friction materials, composite parts made with various synthetic thermosetting resins, such as phenolic resins, and structural components which may contain reinforcements, such as solid moldings, pre-fabricated composite structures, and shaped articles such as refractory bricks.